

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:
 - a substrate;
 - 5 a thin film transistor disposed on the substrate;
 - a storage capacitor disposed adjacent the thin film transistor and keeping a voltage supplied through the thin film transistor;
 - a first semiconductor portion making a first capacitance coupling with a gate electrode of the thin film transistor;
 - 10 a second semiconductor portion making a second capacitance coupling with a storage capacitor electrode of the storage capacitor, the second semiconductor portion not being in a physical contact with the first semiconductor portion; and
 - a metal wiring connecting the first semiconductor portion and the second semiconductor portion.
- 15 2. The semiconductor device of claim 1, further comprising a pixel electrode, wherein the metal wiring is connected to the pixel electrode.
3. The semiconductor device of claim 1, wherein the storage capacitor electrode is
20 disposed parallel to the gate electrode.
4. The semiconductor device of claim 1, wherein the first semiconductor portion is bent so that the first semiconductor portion intersects a gate line that comprises the gate electrode.
- 25 5. The semiconductor device of claim 4, wherein the bending of the first semiconductor portion is symmetrical with respect to a center line that is normal to the gate line.
6. The semiconductor device of claim 1, wherein the thin film transistor comprises a
30 p-type channel or an n-type channel.
7. The semiconductor device of claim 1, wherein the first and second semiconductor

portions are formed from a semiconductor layer disposed on the substrate.

8. A manufacturing method of a semiconductor device, comprising:
providing a substrate;

5 forming a first semiconductor portion and a second semiconductor portion on the substrate so that the first semiconductor portion is physically separated from the second semiconductor portion;

forming an insulating film on the first semiconductor portion and the second semiconductor portion;

10 forming a gate electrode on the insulating film so that the gate electrode and the first semiconductor portion are part of a thin film transistor;

forming a storage capacitor electrode on the insulating film so that the storage capacitor electrode and the second semiconductor portion are part of a storage capacitor;

forming a source region and a drain region in the first semiconductor layer; and

15 forming a metal wiring connecting the first semiconductor portion and the second conductor portion.

9. The manufacturing method of the semiconductor device of claim 8, further comprising forming an interlayer insulating film over the first and second semiconductor portions, forming a first contact hole in the interlayer insulating film so as to provide a contact to the first semiconductor portion, and forming a second contact hole in the interlayer insulating film so as to provide a contact to the second semiconductor portion.

10 The manufacturing method of the semiconductor device of claim 9, further comprising forming a planarization insulating film over the metal wiring, forming a third contact in the planarization insulating film to provide a contact to the metal wiring, and forming a pixel electrode connected to the metal wiring through the third contact hole.

11. The manufacturing method of the semiconductor device of claim 8, wherein the source and drain regions are formed by ion implantation.